

Supplementary Material

## **Superparamagnetic Nanoparticle Clusters for Cancer Theranostics Combining Magnetic Resonance Imaging and Hyperthermia Treatment**

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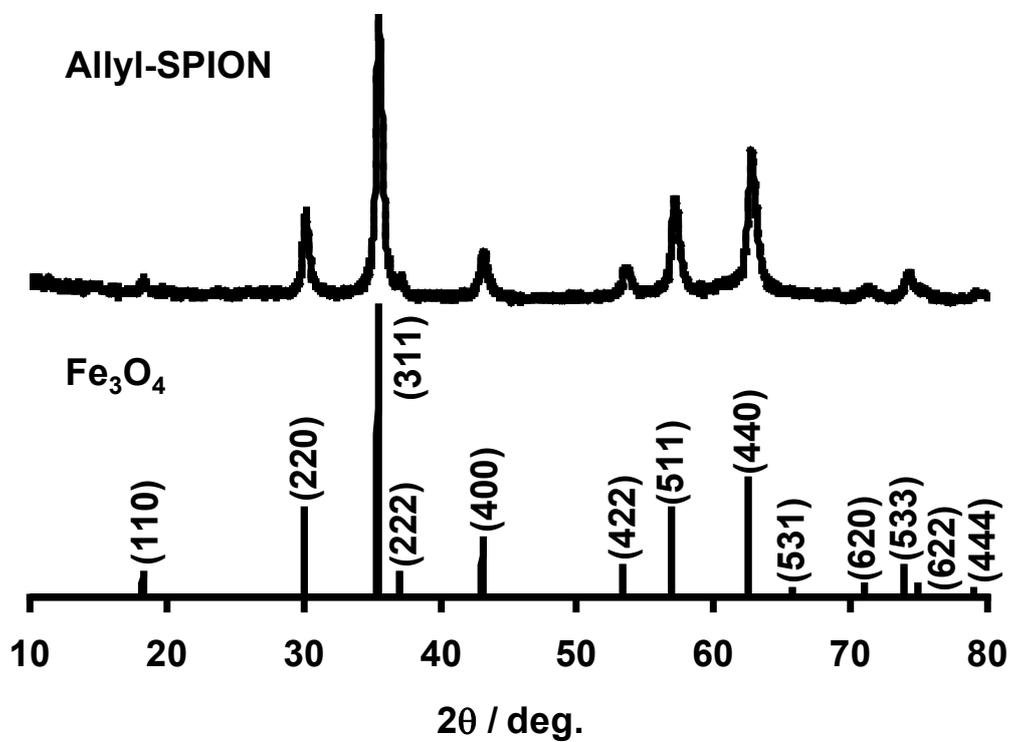
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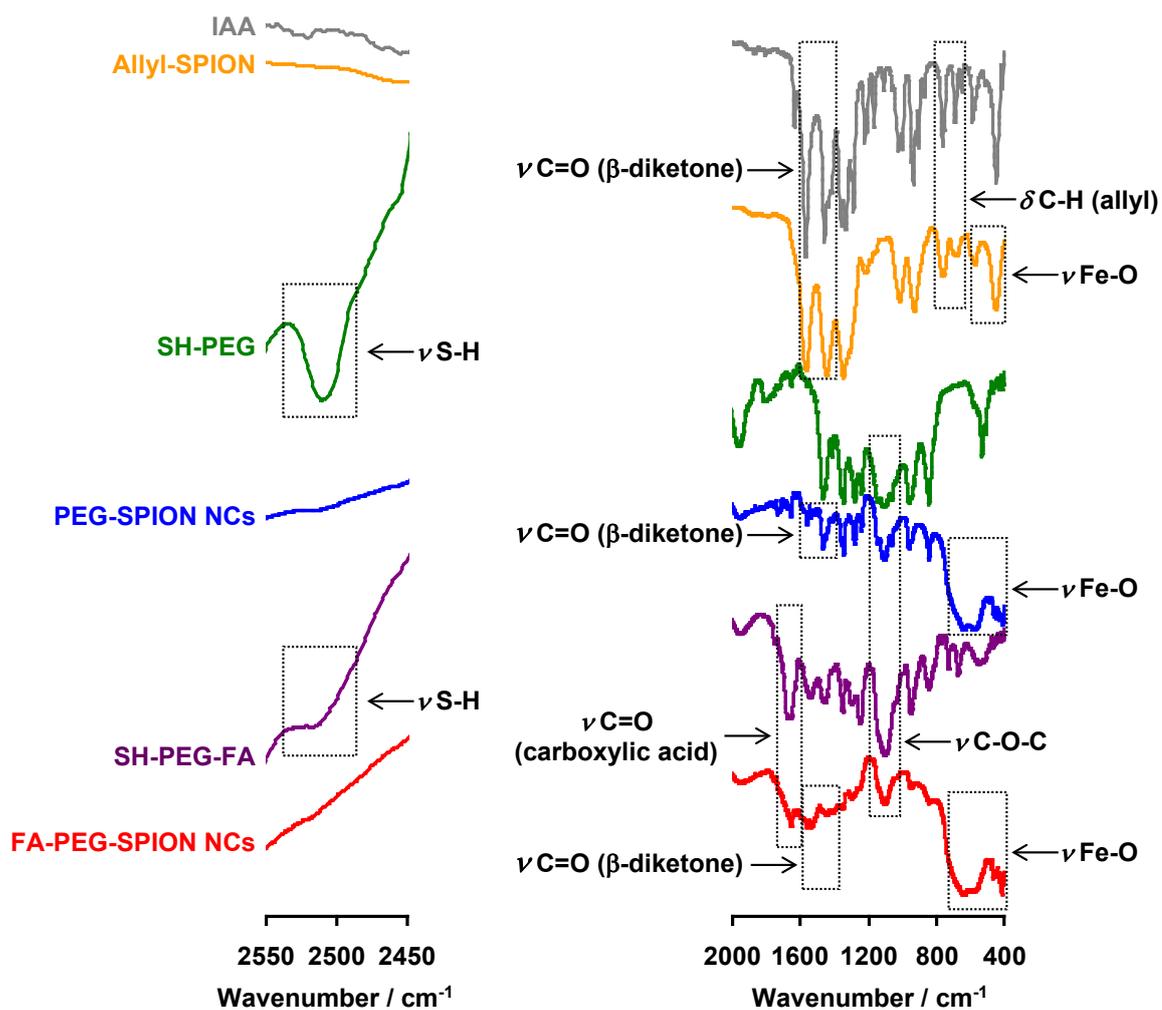
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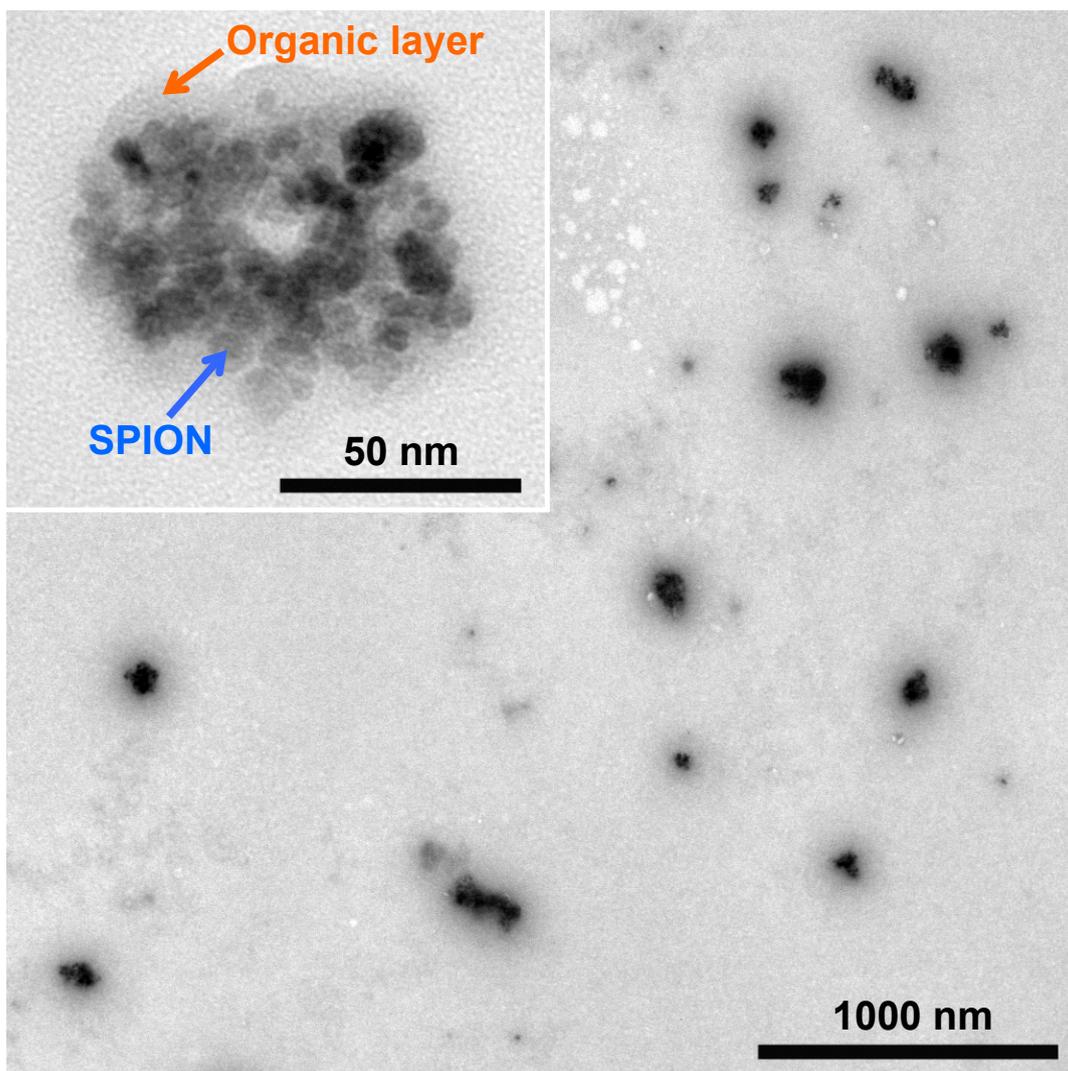
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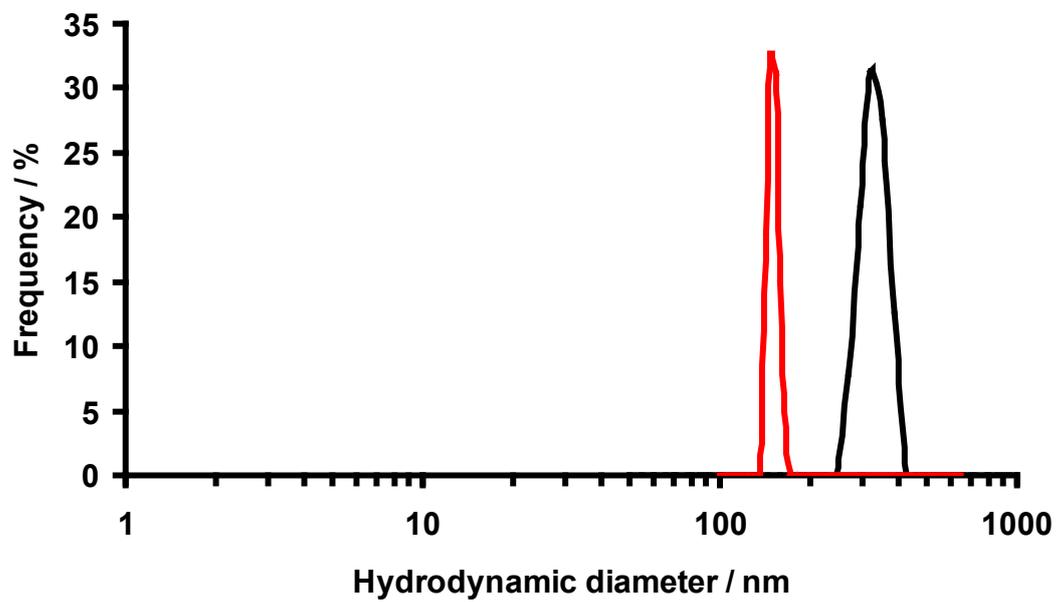
**Figure S1.** XRD patterns of allyl-SPION and magnetite (JCPDS card number 190629).



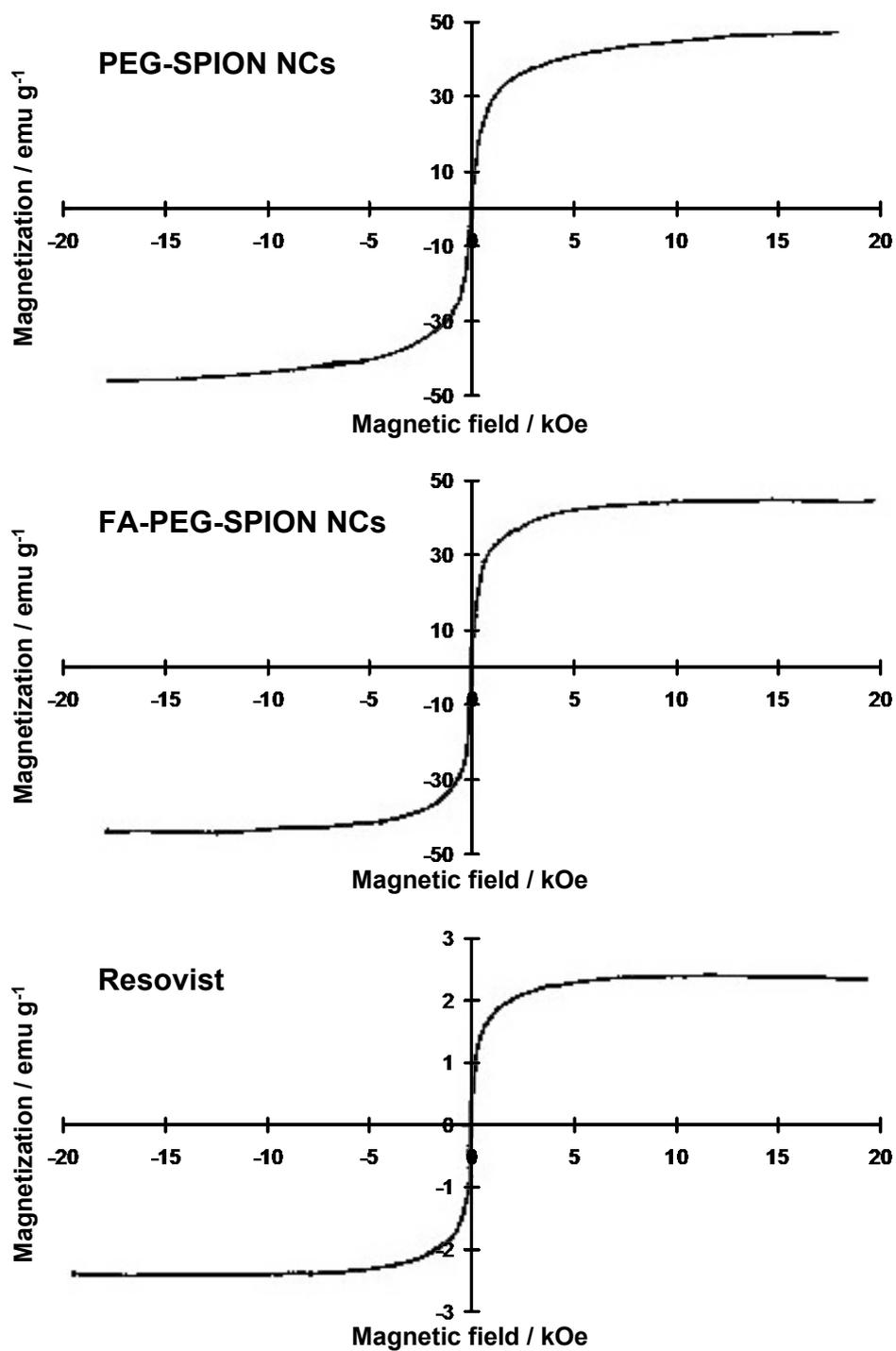
**Figure S2.** FTIR spectra of IAA, allyl-SPIONs, SH-PEG, PEG-SPION NCs, SH-PEG-FA and FA-PEG-SPION NCs.



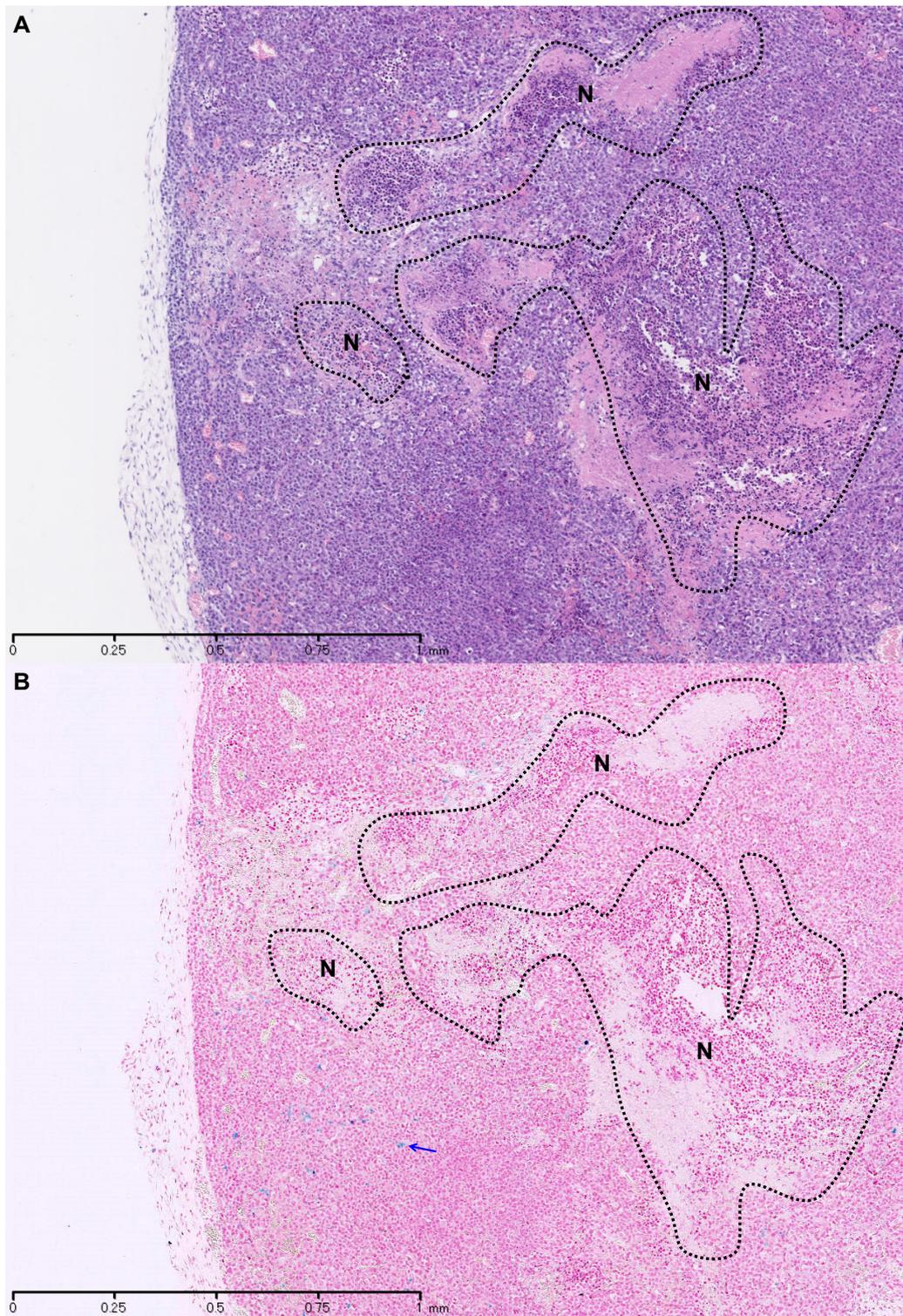
**Figure S3.** TEM image of PEG-SPION NCs.



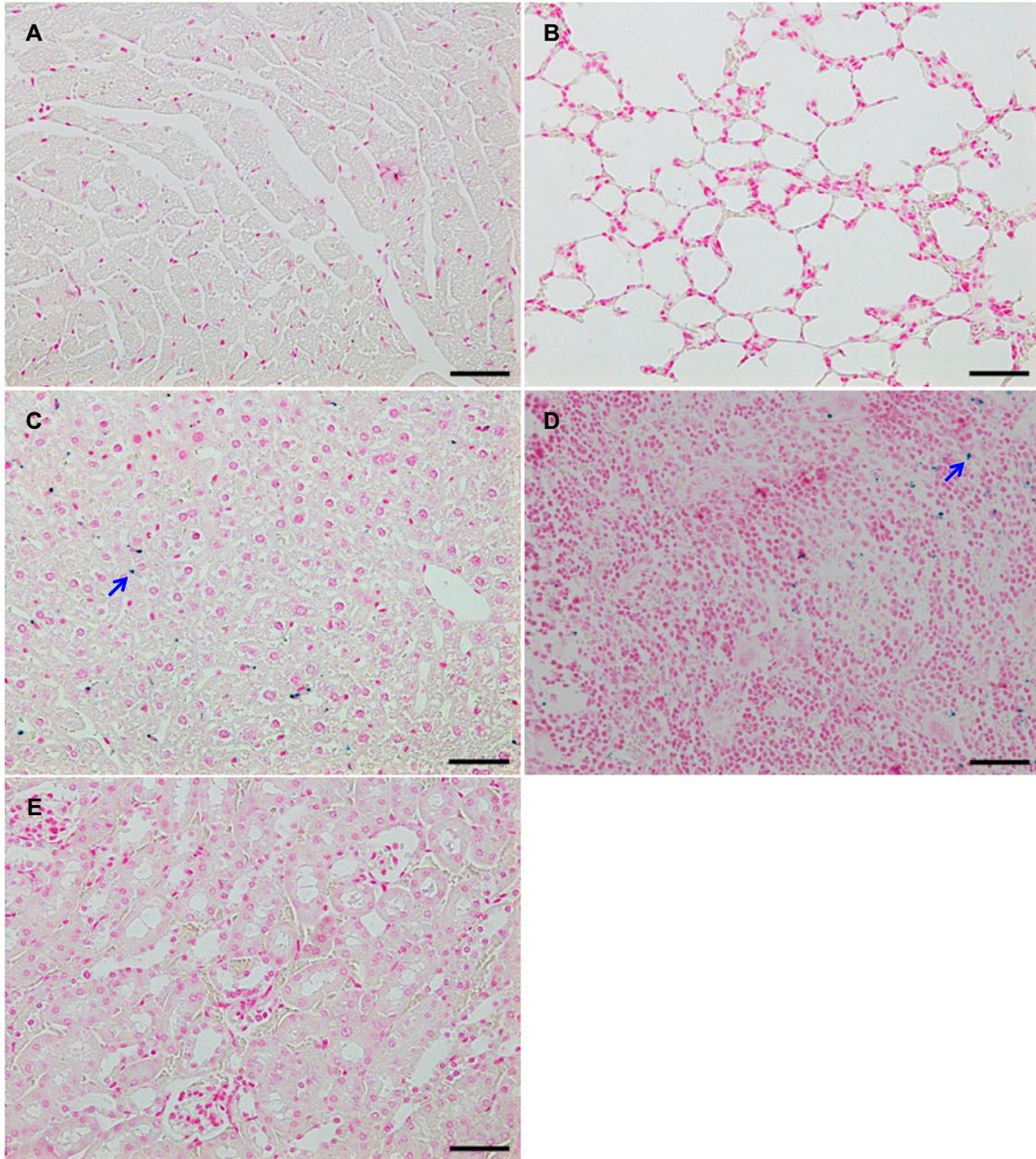
**Figure S4.** DLS curves of FA-PEG-SPION NCs in PBS at 3 months after its synthesis: (red) with and (black) without ultrasonic treatment.



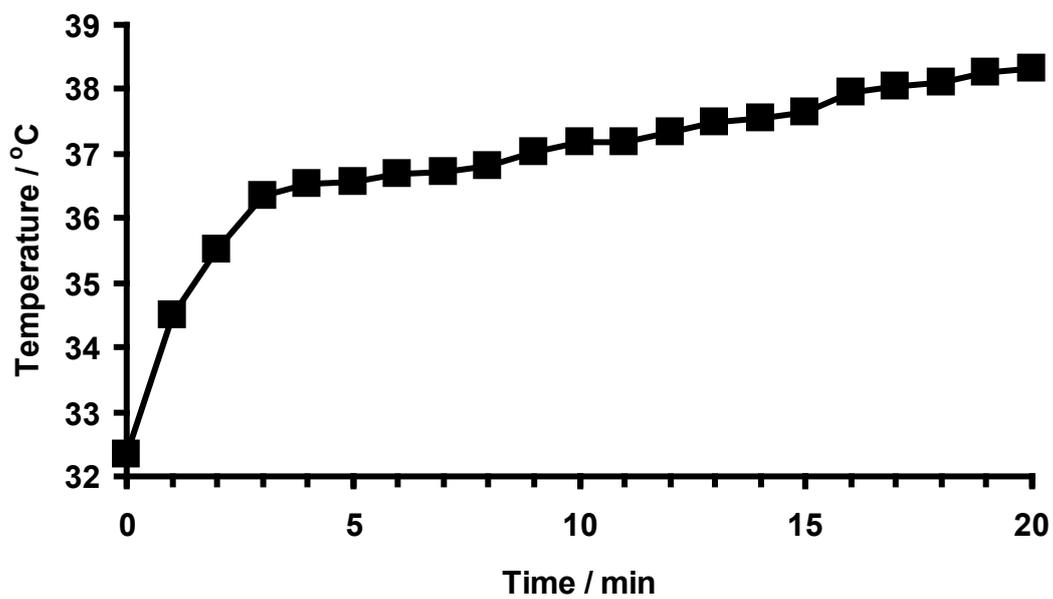
**Figure S5.** Magnetization curves of PEG-SPION NCs, FA-PEG-SPION NCs and Resovist.



**Figure S6.** Histological observation of tumors 24 h after intravenous injection of FA-PEG-SPION NCs visualized using hematoxylin and eosin staining (A) and Prussian Blue nuclear fast red staining (B): iron is stained blue as indicated by the arrow. N indicates necrotic area.



**Figure S7.** Histological observation of (A) heart, (B) lung, (C) liver, (D) spleen, and (E) kidney 24 h after intravenous injection of FA-PEG-SPION NCs visualized using Prussian Blue nuclear fast red staining.



**Figure S8.** Temperature–time curve of the tumor of a mouse 24 h after intravenous injection of FA-PEG-SPION NCs under an AC magnetic field.